



GREELEY AND HANSEN

CITY OF BLOOMINGTON UTILITIES

Wet Weather Program Update

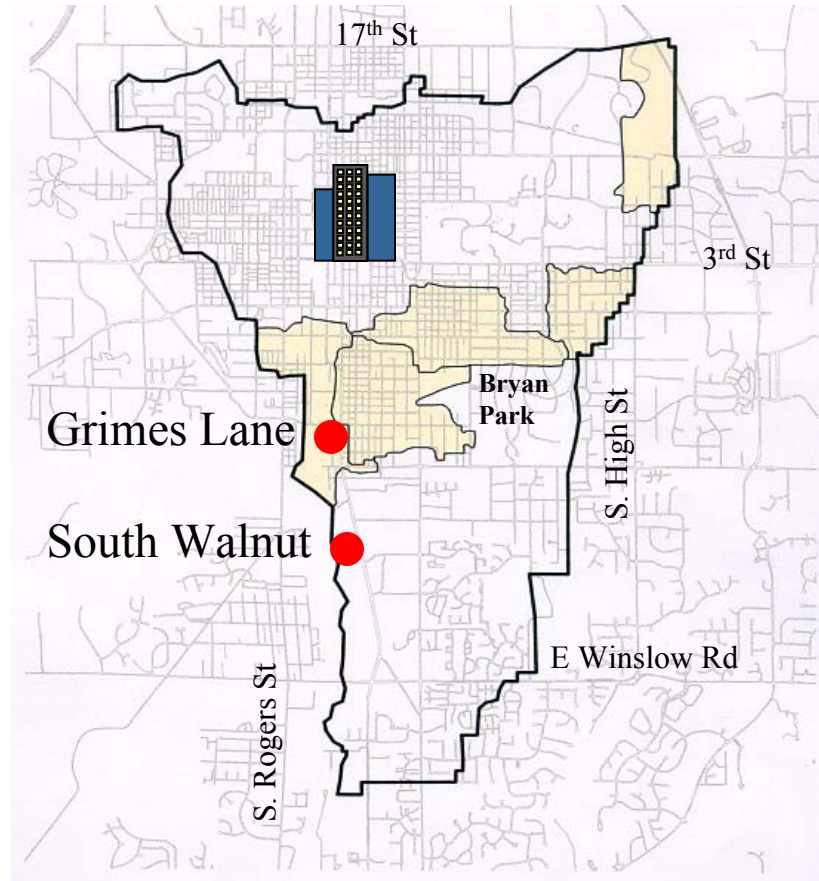
July 25, 2005

Agenda / Project Status

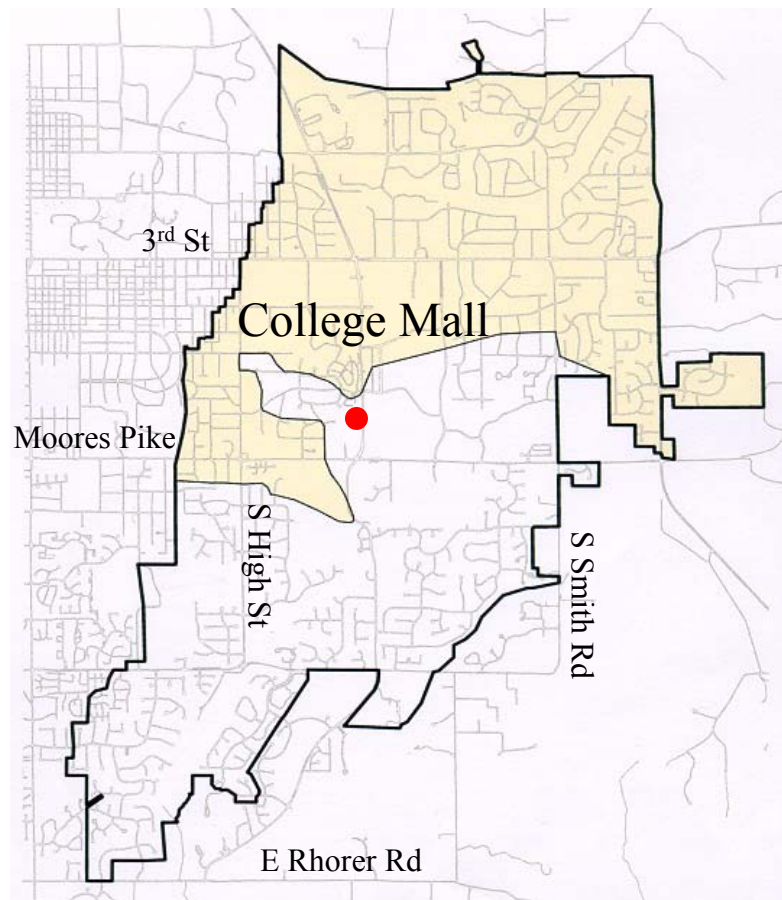
Project	% Complete
Grimes Lane LS	100%
Dillman Dechlorination	100%
CE Basin Rehab Design	90%
SE Basin Study	90%
CMOM Plan	70%
SSO Elimination Plan	40%

Central East Sub-basin Rehabilitation Design

- **Scope**
 - 35,000 ft (10% of basin)
 - 225 manholes
- **Purpose**
 - Reduce I/I
 - Restore 50-year old assets
- **Construction Cost**
 - \$3 million



South East Basin Study - Results



Wastewater Utility Capital Drivers

- **Public health and safety**
- **Environmental protection**
- **Aging infrastructure**
- **Outside interests**



Wet Weather Program Drivers

- **Sanitary Sewer Overflows**
 - Environmental protection
 - Public health and safety
- **System capacity**
 - Aging infrastructure
- **Economic Development**
 - Outside interests



Wet Weather Management Program Basics

- **Find It** **20% of cost**
- **Fix It** **80% of cost**

Find It

- **Sanitary Sewer Evaluation Study**
 - Flow monitoring
 - Dye water flooding
 - Smoke testing
 - Manhole inspections
 - Late night flow isolations
 - TV tape reviews



Fix It

- **Capital**

- Cured In Place Pipe
- Dig and replace pipe
- New interceptors
- Relief sewers

- **Maintenance**

- Manhole rehabilitation
- Private source elimination
- Point repairs
- Storm connection separations



Estimated Inflow Volumes

Inflow Source	Flow Rate (gpm)
CE-1 Public	250
CE-1 Private	1,250
SE-1 Public	20
SE-1 Private	320
Dillman Public	0
Dillman Private	60
Totals	1,900 2.75 mgd

Pipe Rehabilitation Priority Breakdown

	High	Medium	None	Basin Total
CE-1	18,000	20,000	297,000	335,000
SE-1	25,000	10,000	387,000	422,000
Dillman	0	0	94,000	94,000
Total	43,000	30,000	778,000	851,000

Feet of pipe

Manhole Rehabilitation Priority Breakdown

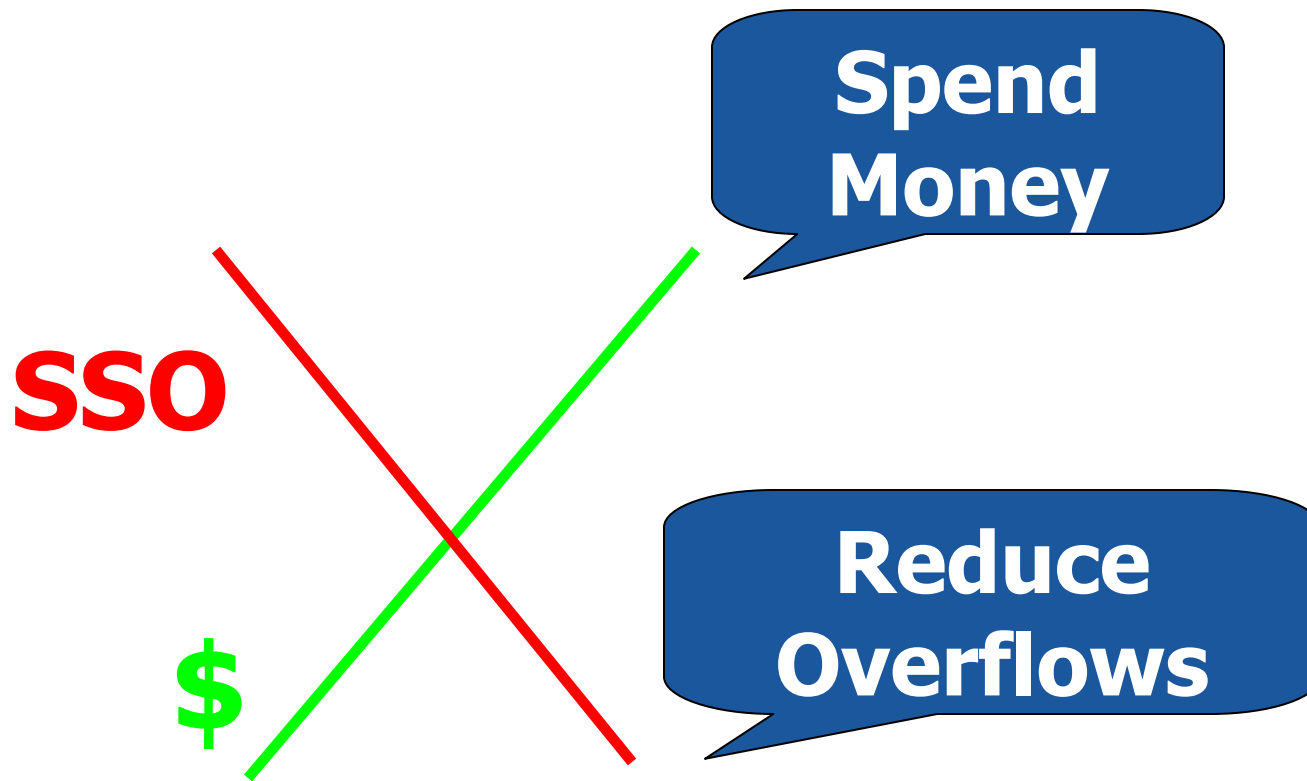
	High	Medium	Low	Basin Total
CE-1	129	77	12	1,990
SE-1	45	12	17	2,325
Dillman	0	36	0	445
Total	174	125	29	4,760

Rehabilitation Costs

	High	Medium	Low	Basin Total
CE 2000 \$	\$3.06	\$4.17	\$0.37	\$7.60
SE 2005 \$	\$3.62	\$1.11	\$0.05	\$4.78
Dillman 2002 \$	\$0.03	\$0.01	\$0.01	\$0.05
Total Not Adjusted	\$6.71	\$5.29	\$0.43	\$12.43

Millions

Wet Weather Program Sustainability



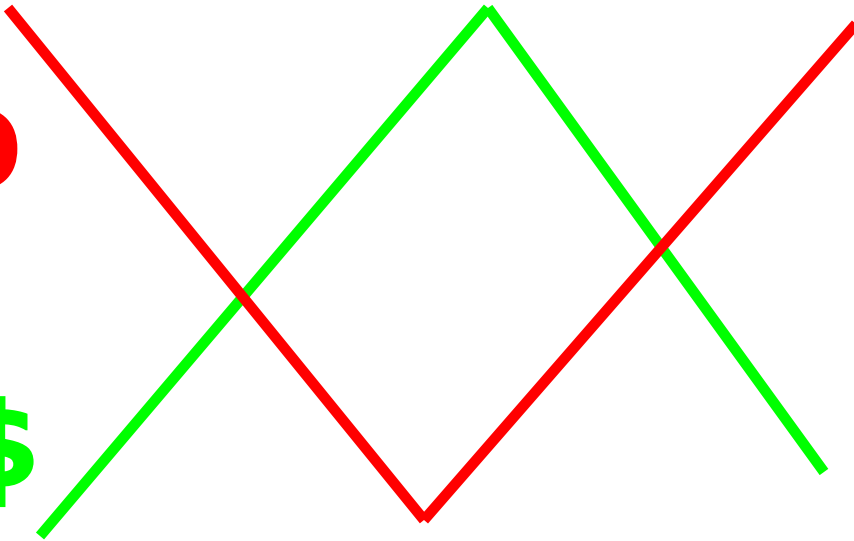
Wet Weather Program Sustainability

SSO

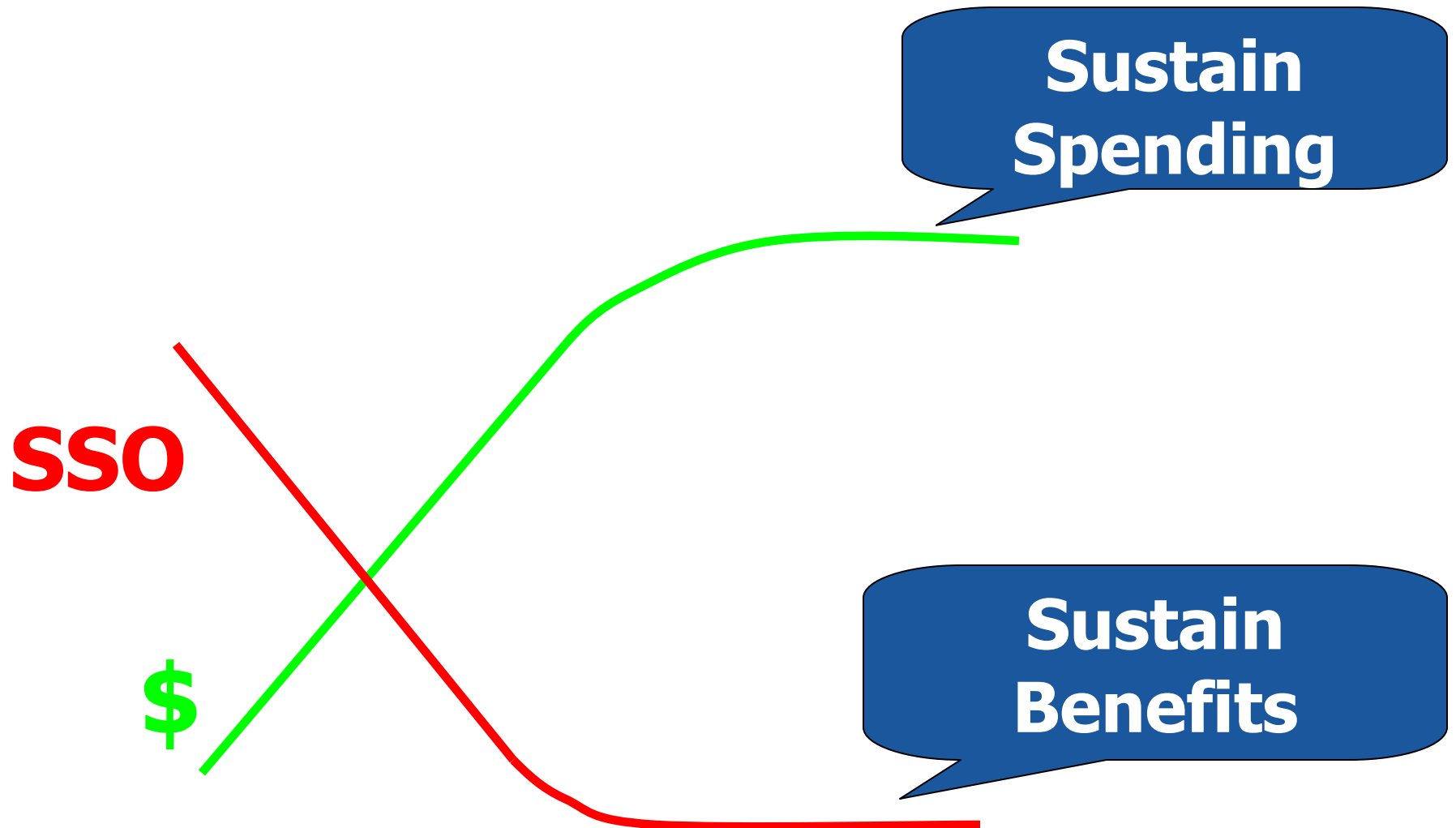
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**Increase
Overflows**


**Stop
Spending**



Wet Weather Program Sustainability



Summary

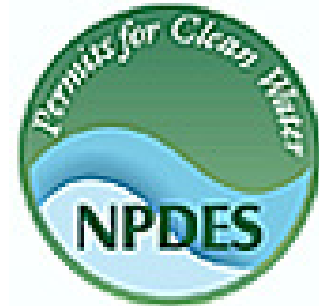
- **Most money has been spent on Find It**
 - **Over \$12 M in projects identified**
 - **Projects cannot be done at once**
 - **Lower priority projects become higher priority projects over time**
- 

GRW Project Status

Blucher Poole Model	\$77,900	98%
SE Basin Study	\$327,000	95%
CE Basin 6 & 7 Design	\$78,000	55%
CE Basin 6 & 7 Bid and Construction	\$41,600	0%
CE Basin Post Monitors	\$24,000	0%
SSO Elimination	\$95,000	25%

Capacity, Management, Operations, and Maintenance (CMOM)

- Requirement



Goal

Reduce SSOs

Lower Capital Cost



CMOM Phases



- **General Standards**



- **Maintenance**

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- **Capacity Assurance**



- **Information Management**

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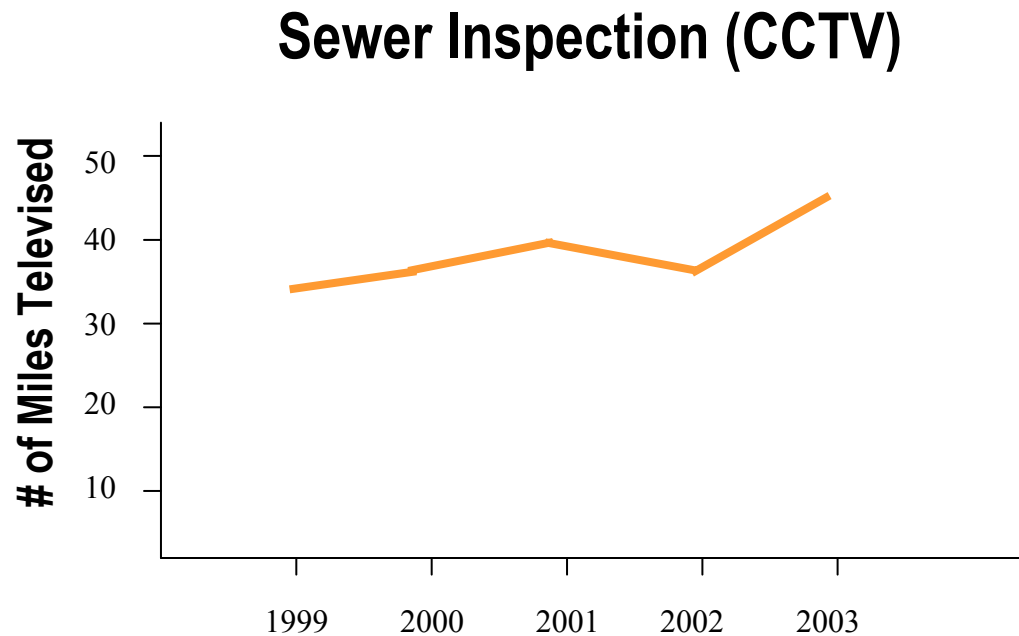
- **Training**

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- **Monitoring/Modification**

CMOM Benefits

- Optimizes use of existing facilities and resources
- Reduces service interruptions/system failures
- Better understanding of sewer system
- Provides a snapshot of utility performance
- Employee Training Tool



SSO Elimination Plan

- **Hydraulic Capacity Assessment**
- **Alternatives Evaluation**
- **Cost vs. SSO Reduction**
- **Recommended Plan**
- **Financial Plan**

Future Schedule for Wet Weather Program

Project	Next Step
Grimes Lane LS	Complete
Dillman Dechlorination	Permanent Location
CE Basin Rehab Design	Construction
SE Basin Study	Design —→ Construction
CMOM Plan	Complete and Implement
SSO Elimination Plan	Complete Long Term Plan and Submit to IDEM